

Figure 1
TNF-gamma

1 CCCAATCAAGAGAAATTCCTACTATCACCAGTTGGCCGACTTTCCAAGTCTAGTGCAGA 60
61 AATCCAAGGCACCTCACACCTAGAGTTCTTATACCTCTGAGACTCCAGAGGAAAGAACAA 120
121 GACAGTGCAGAAGGATATGTTAGAACCCACTGAAAACCTAGAAGGTTGAAAAGGAAGCAT 180
181 ACCCTCCTGACCTATAAGAAAATTTTCAGTCTGCAGGGGGATATCCTTGTGGCCCAAGAC 240
241 ATTGGTGTATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTAG 300
301 GACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCTGTAAGACAAGTGTTTTGT 360
361 CCAATGATGAATGGGGAGAAAACAGTTCAGCCAATCACTTATGGGCACAGAATGGAATT 420
421 TGAAGGGTCTGGTGCCTGCCCTTGTTCATACGTAAACAAGAGAGGCATCGATGAGTTTAT 480
481 CTGAGTCATTTGGGAAAGGATAATTCTTGACCAAGCCATTTTCTAAACACAGAAGAAT 540
541 AGGGGGATTCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAAA 600
601 TTTTCAGGTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCAGGTCACTAGTC 660
661 CAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGTCACATATTCTTCATTTCATCC 720
721 TCCCCAAAGCAGTTTGTAGCTGTTAGGTATATTCGATCACTTTAGTCTATTTTGAAAATG 780
781 ATATGAGACGCTTTTFAAGCAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTTC 840
1 M R R F L S K V Y S F P M R K L I L F L 20
841 TTGTCTTTCCAGTTGTGAGACAACTCCACACAGCACTTTAAAAATCAGTTCCAGCTC 900
21 V F P V V R Q T P T Q H F K N Q F P A L 40
901 TGCACTGGGAACATGAAGTAGGCCTGGCCTTCACCAAGAACCGAATGAAGTATACCAACA 960
41 H W E H E L G L A F T K N R M N Y T N K 60
961 AATTCCTGCTGATCCAGAGTCGGGAGACTACTTCATTTACTCCAGGTCACATTCCGTG 1020
61 F L L I P E S G D Y F I Y S Q V T F R G 80

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Figure 1 (continued)
TNF-gamma

1021	GGATGACCTCTGAGTGCAGTGAAATCAGACAAGCAGGCCGACCAAACAAGCCAGACTCCA	1080
81	M T S E C S E I R Q A G R P N K P D S I	100
1081	TCACTGTGGTCATCACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGG	1140
101	T V V I T K V T D S Y P E P T Q L L M G	120
1141	GGACCAAGTCTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCCA	1200
121	T K S V C E V G S N W F Q P I Y L G A M	140
1201	TGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTTGGTGG	1260
141	F S L Q E G D K L M V N V S D I S L V D	160
1261	ATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAAT	1320
161	Y T K E D K T F F G A F L - L *	174
1321	ATCATTATATGAAAGTCTCTGCCACCGAGTTCCTAATTTTCTTTGTTCAAATGTAATTA	1380
1381	TAACCAGGGGTTTTCTTGGGGCCGGGAGTAGGGGGCATTCCACAGGGACAACGGTTTAGC	1440
1441	TATGAAATTGCGGGCCAAAATTTACACTTCATGTGCCTTACTGATGAGAGTACTAACTG	1500
1501	GAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTGAGGATTGGCGAGTTTCT	1560
1561	AAATATTAAGACACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGA	1620
1621	GAAATATTTCAACACCTCCCTGCTATACAATGGTCACCAGTGGTCCAGTTATTGTTCAAT	1680
1681	TTGATCATAAATTGCTTCAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAA	1740
1741	AACAGTATAAACTTTCAGAGGCAAAATCCTTCACCAATTTTCCACATACTTTCATGCCT	1800
1801	TGCCTAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTACACAGAAGGAGTT	1860
1861	GGTTTTCATGTCATCTACAGCATATGAGAAAAGCTACCTTTCTTTTGATTATGTACACAG	1920
1921	ATATCTAAATAAGGAAGTTTGAGTTTCACATGTATATCCCAAATACAACAGTTGCTTGTA	1980
1981	TTCAGTAGAGTTTTCTTGCCACCTATTTTGCTGCTGGGTTCTACCTTAACCCAGAAGACA	2040

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Figure 1 (continued)
TNF-gamma

2041 CTATGAAAAACAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCCTG 2100
2101 ATCAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCCAGGCGCAGTGGC 2160
2161 TCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTGGGTGGATCATCTAAGGCCGGGA 2220
2221 GTTCAAGACCAGCCTGACCAACGTGGAGAAACCCCATCTCTACTNAAAATACNAAATTAG 2280
2281 CCGGGCGTGGTAGCGCATGGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATT 2340
2341 NCTTGAAGTGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGGCCATGCACTCCAGCCT 2400
2401 GGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAA 2442

0946139 000000

MATCH WITH FIG. 2B

MATCH WITH FIG. 2A

FIG. 2B

40	T	P	S	A	T	A	R	Q	H	P	K	M	H	L	A	H	S	T	L	K	P	A	A	H	L	T	G	TNFBeta			
71	F	-	-	-	Q	K	L	P	E	E	P	D	L	S	P	G	L	-	-	P	A	A	H	L	T	G	LTbeta				
121	V	S	S	F	E	K	I	A	N	P	S	T	P	S	E	T	K	P	-	-	R	S	V	A	H	L	T	FASL			
38	-	-	-	-	P	-	A	L	H	E	R	L	R	A	N	A	L	T	K	N	R	M	N	Y	T	N	-	K	TNFGamma		
95	N	P	Q	A	E	N	Q	L	L	W	L	R	A	N	A	L	T	K	N	R	M	N	Y	T	N	-	N	-	TNFBeta		
70	D	P	S	K	Q	-	S	L	L	W	L	R	A	N	A	L	T	K	N	R	M	N	Y	T	N	-	N	-	LTbeta		
95	A	P	L	K	Q	-	G	L	L	W	L	R	A	N	A	L	T	K	N	R	M	N	Y	T	N	-	A	E	FASL		
149	N	P	R	S	R	S	I	P	L	W	L	R	A	N	A	L	T	K	N	R	M	N	Y	T	N	-	G	-			
61	F	L	L	I	P	E	S	G	D	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	Q	TNFGamma
123	Q	L	V	V	P	S	E	G	L	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	-	TNFBeta
98	S	L	L	V	P	T	S	G	I	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	-	TNFBeta
124	G	L	A	L	P	Q	D	G	L	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	-	LTbeta
177	G	L	V	I	N	E	A	G	L	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	-	FASL
31	A	G	R	P	N	K	P	D	S	I	T	V	V	I	T	K	V	T	D	S	Y	P	E	P	K	T	Q	-	-	-	TNFGamma
146	-	-	-	-	P	S	H	V	L	T	H	V	T	I	S	R	V	T	D	S	Y	P	E	P	K	T	Q	-	-	-	TNFBeta
125	-	-	-	-	P	S	H	V	L	T	H	V	T	I	S	R	V	T	D	S	Y	P	E	P	K	T	Q	-	-	-	LTbeta
154	G	-	-	-	P	S	H	V	L	T	H	V	T	I	S	R	V	T	D	S	Y	P	E	P	K	T	Q	-	-	-	FASL
204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

MATCH WITH FIG. 2C

MATCH WITH FIG. 2B

[illegible]

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FIG. 3A

Tissue distribution of TNFgamma mRNA

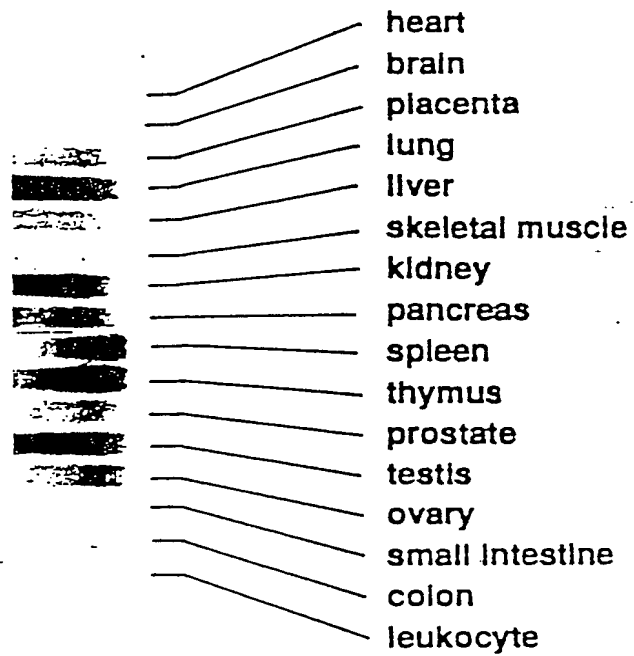


FIG. 3B

Expression of TNFgamma in HUVEC

1 2 3 4 5 6 7 8 9 10 11

Figure 4

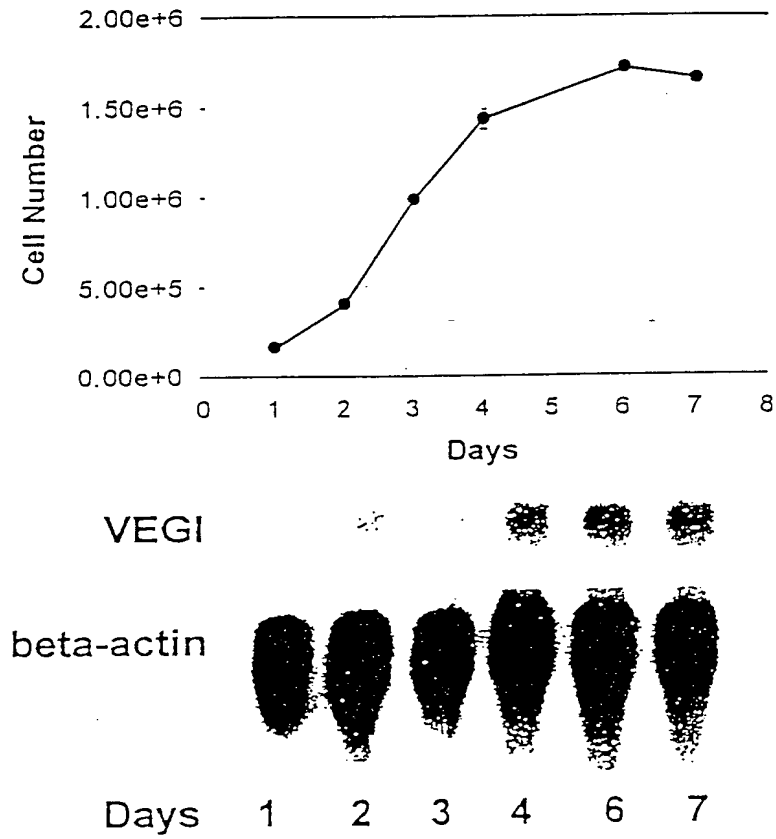
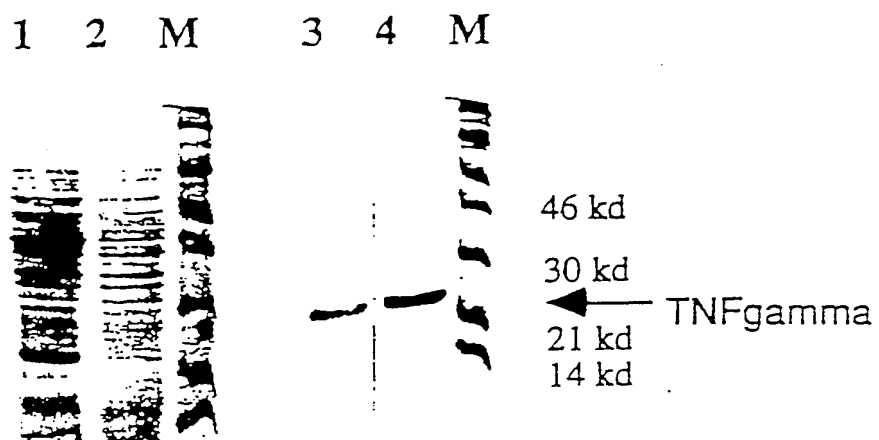


Figure 5

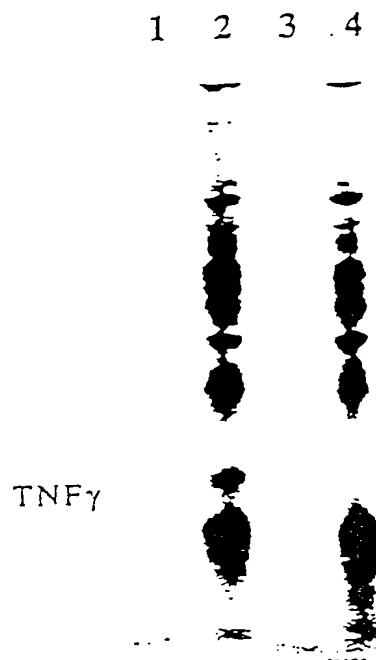
Expression of TNF γ in *E. coli*



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Figure 6

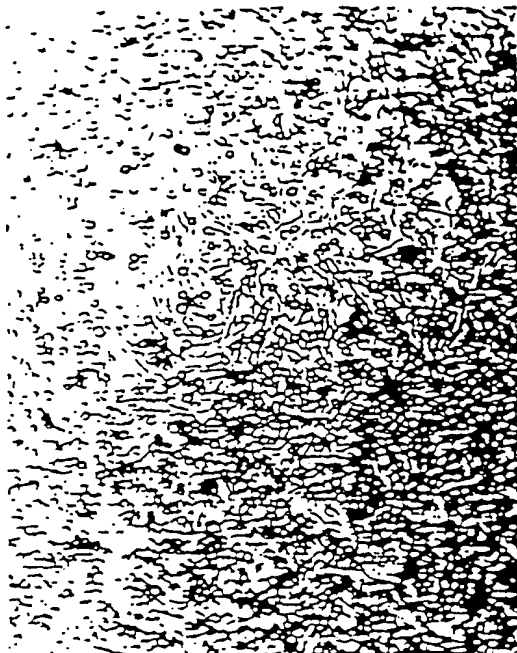
Expression of TNF γ in baculovirus system



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Figure 7Aa
Control



WEHI164

Figure 7Ab
TNF α

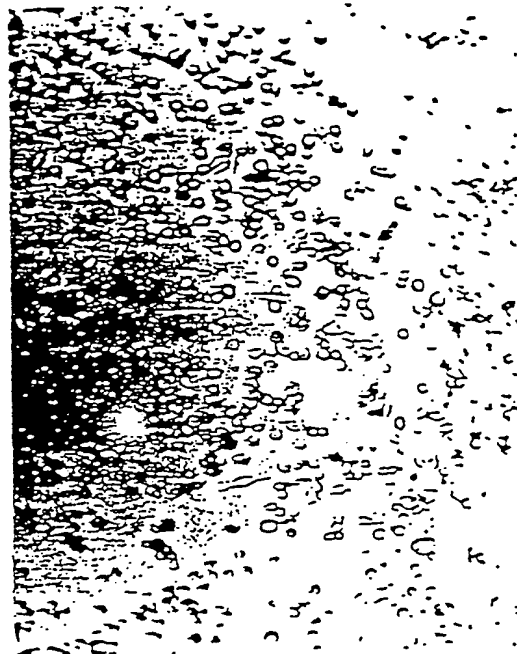


Figure 7Ac
TNF γ

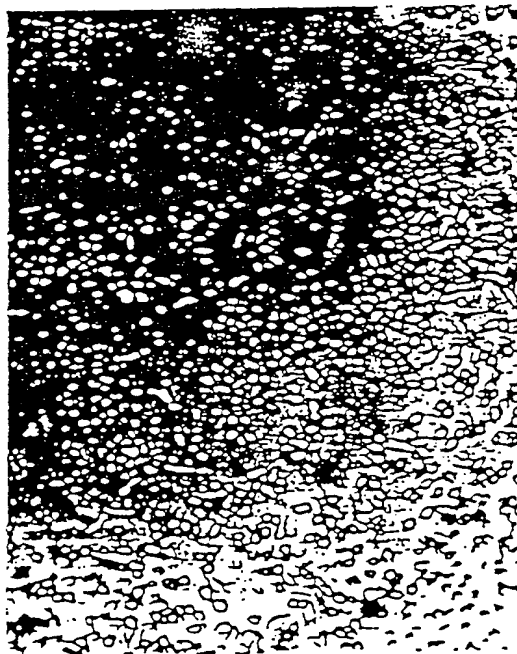
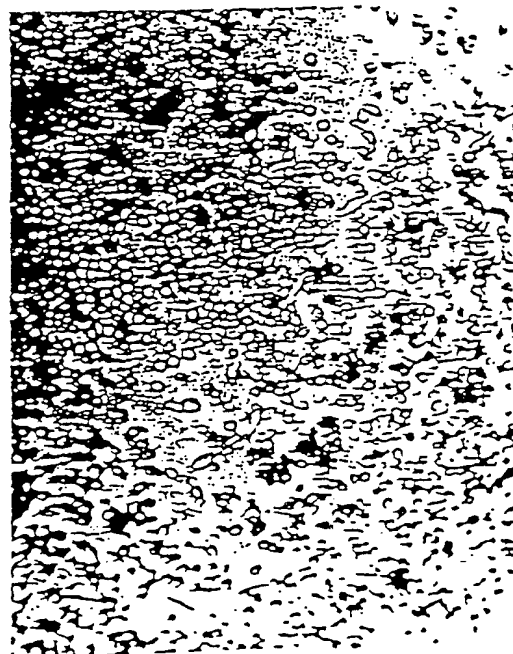


Figure 7Ad
TNF β



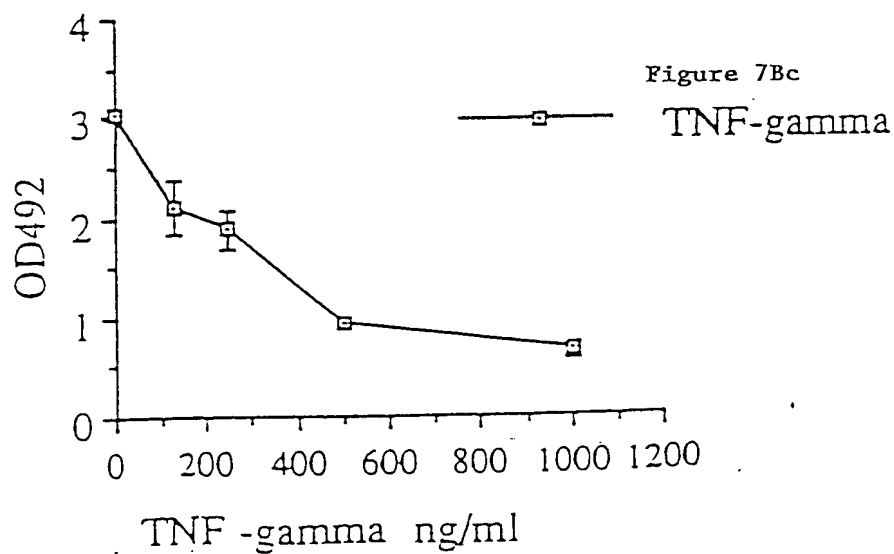
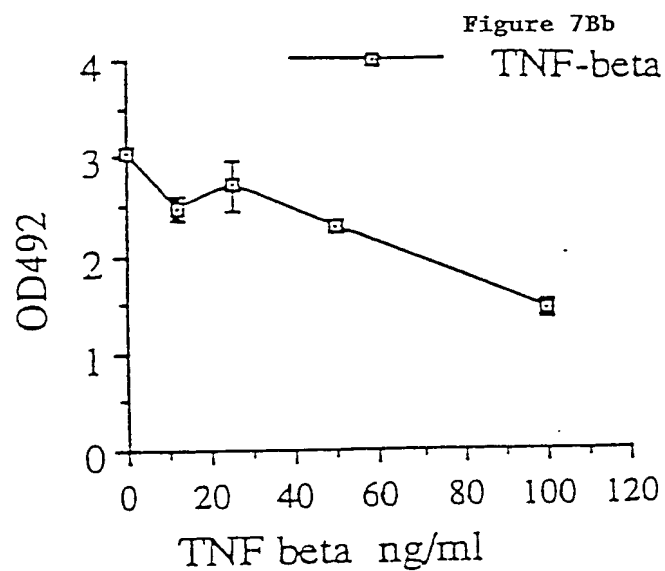
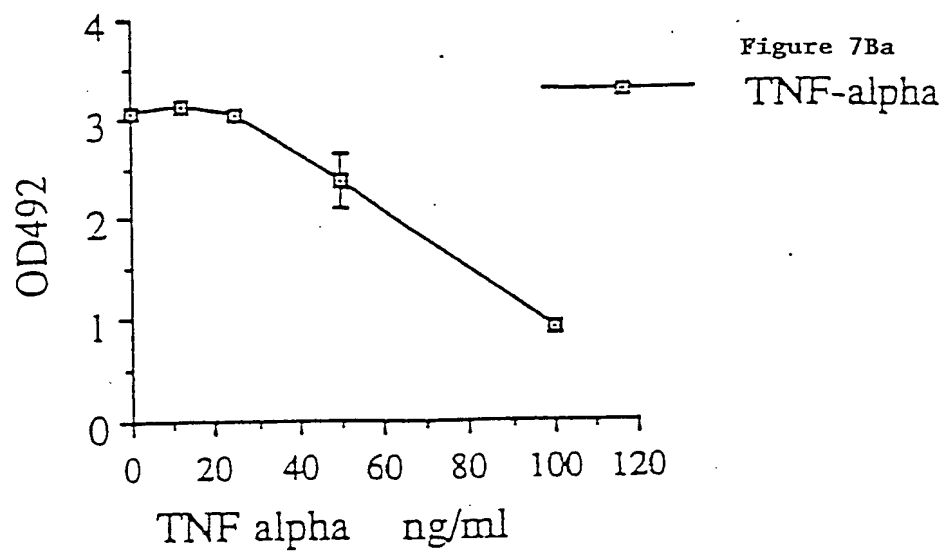


Figure 8A
Control

L929

Figure 8B
TNF α

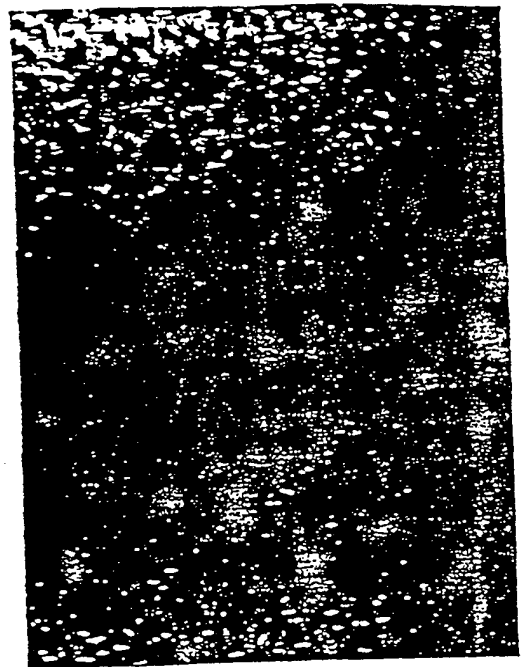
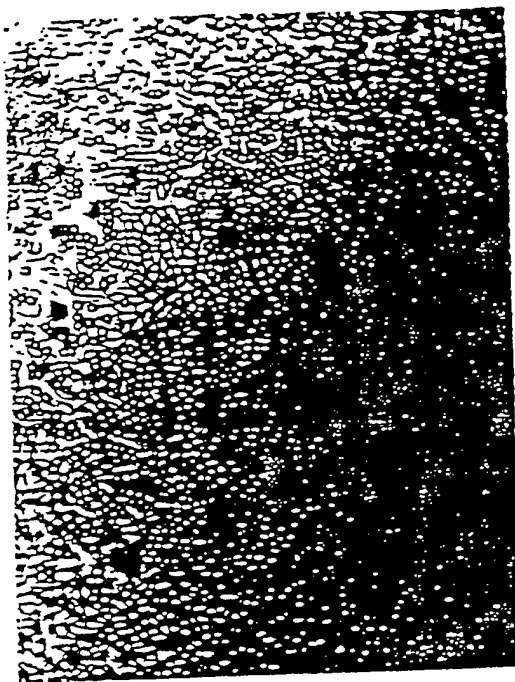
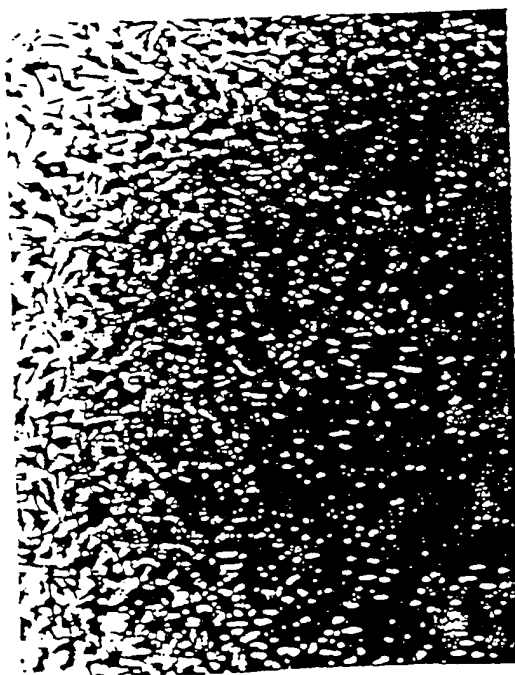


Figure 8C
TNF γ

Figure 8D
TNF β



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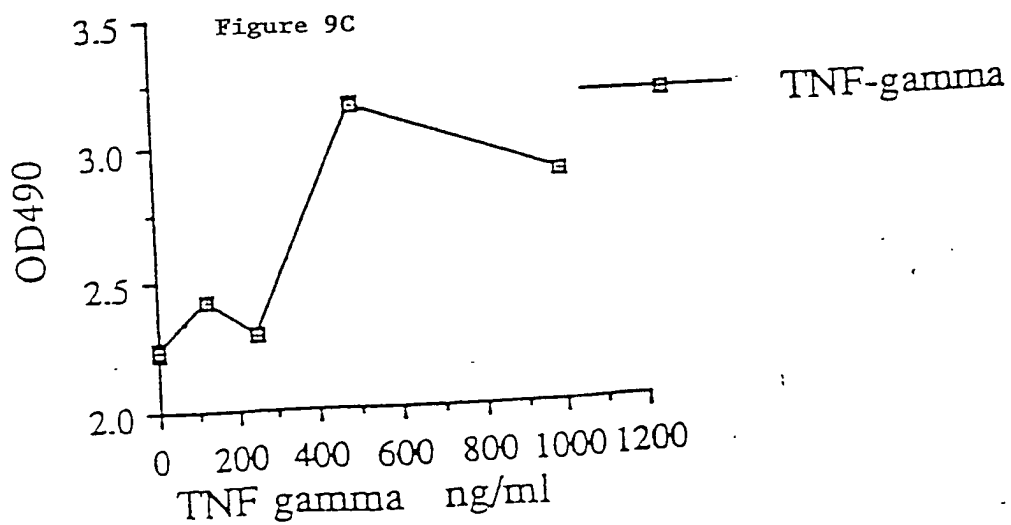
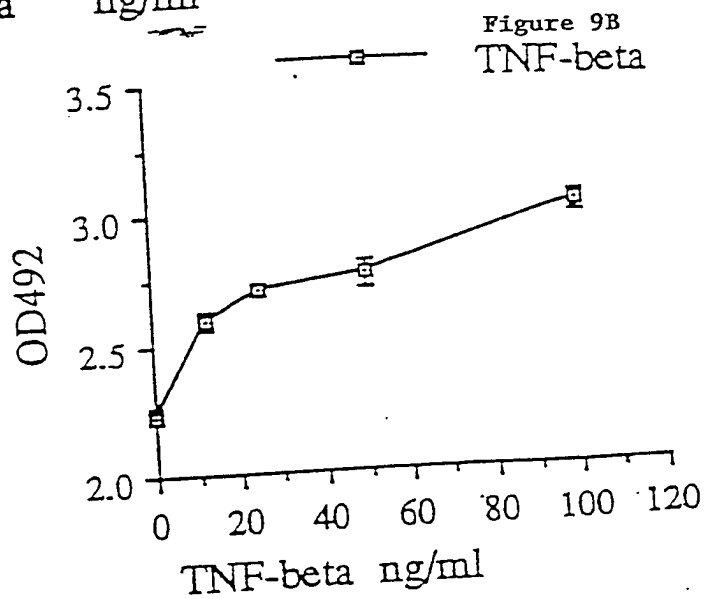
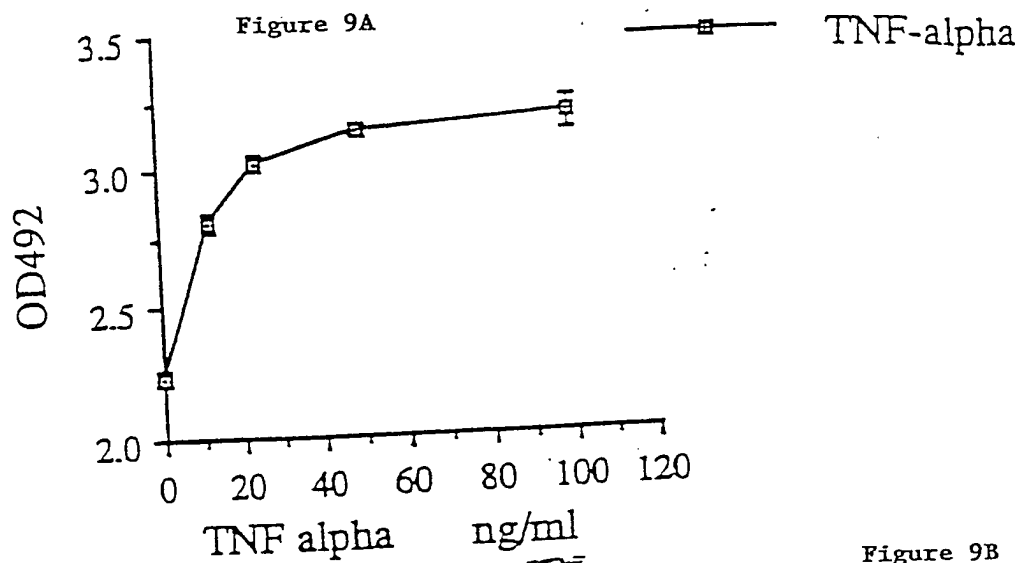
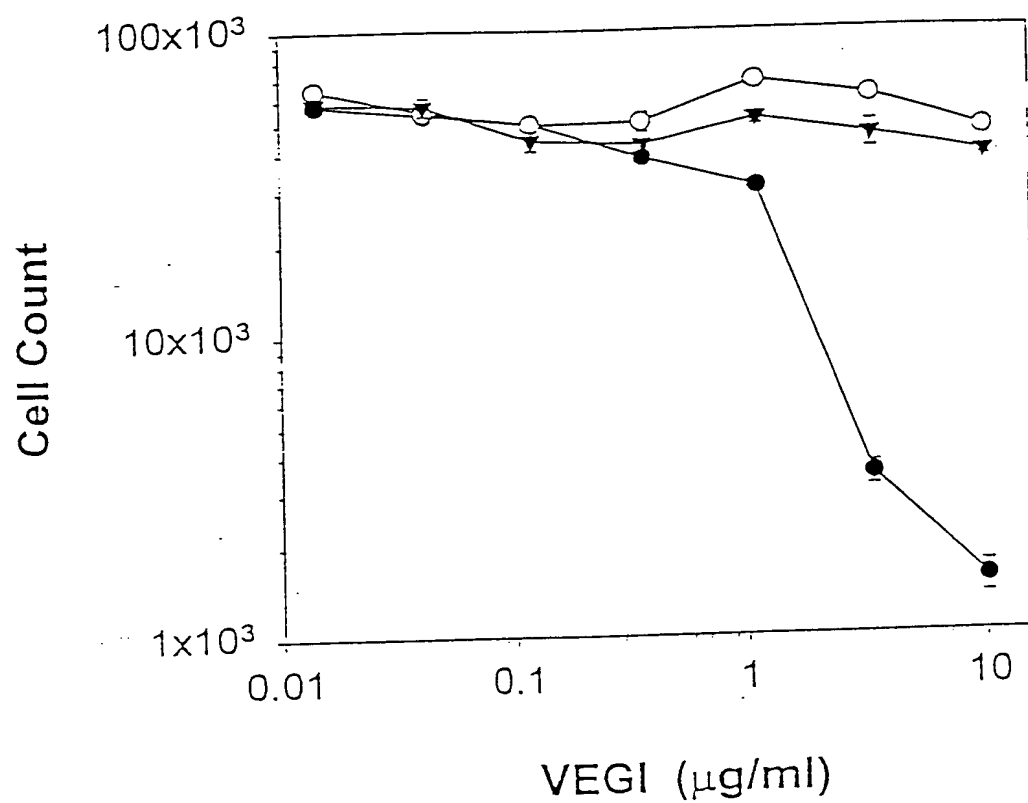


Figure 10



668020" 62F9H260

HL60

Figure 11A
Control

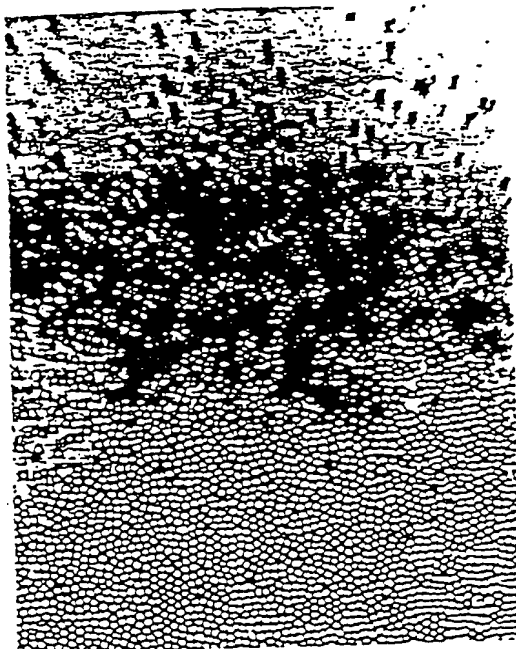


Figure 11B
TNF α

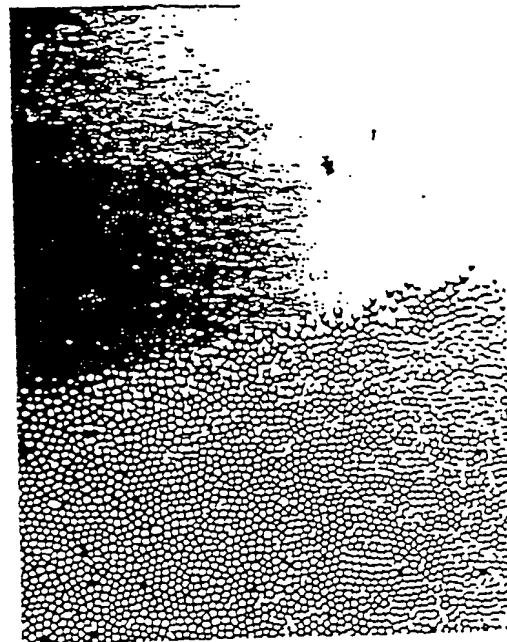


Figure 11C
TNF γ



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Figure 12

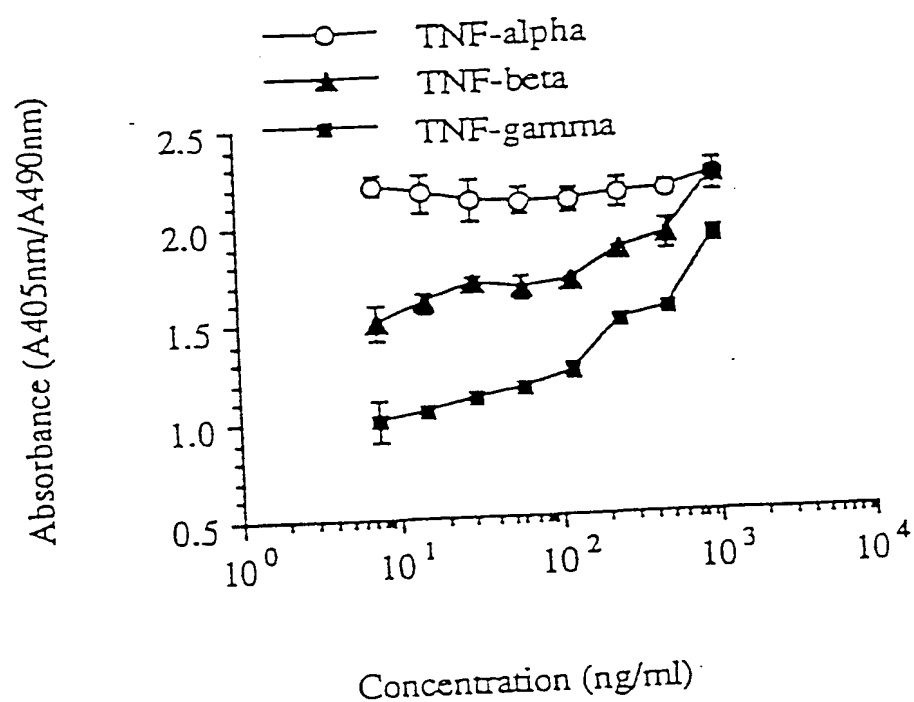


Figure 13

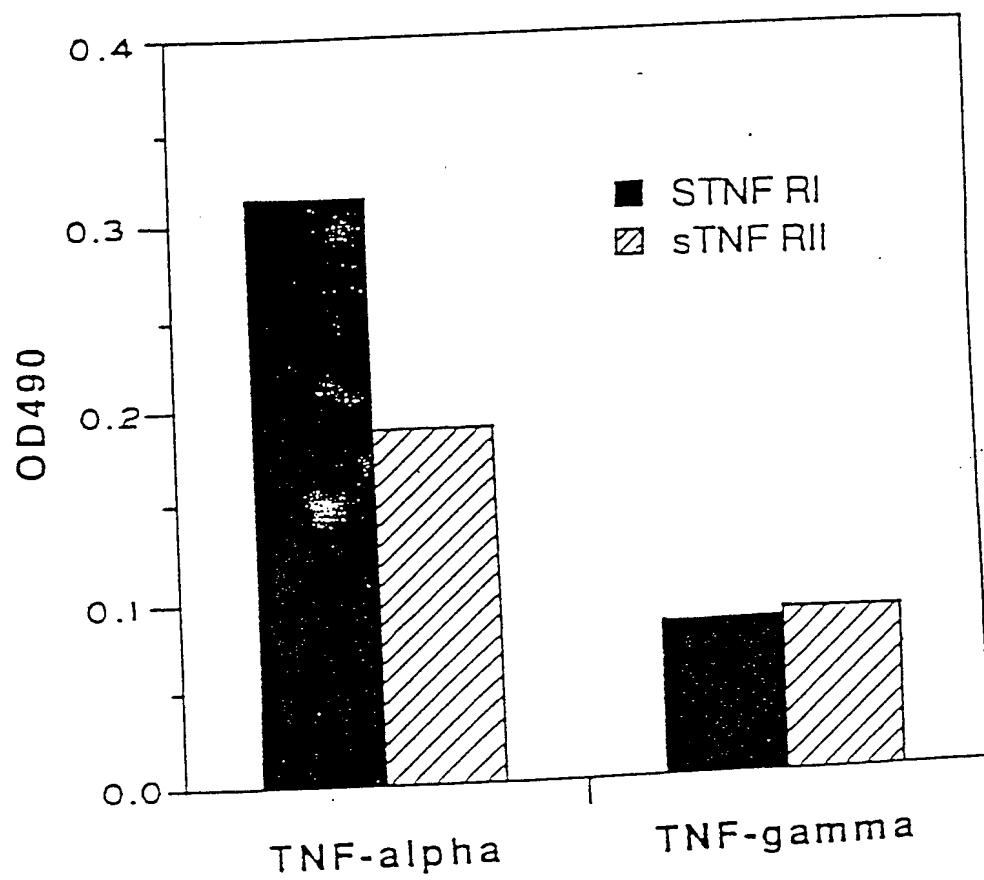


Figure 14

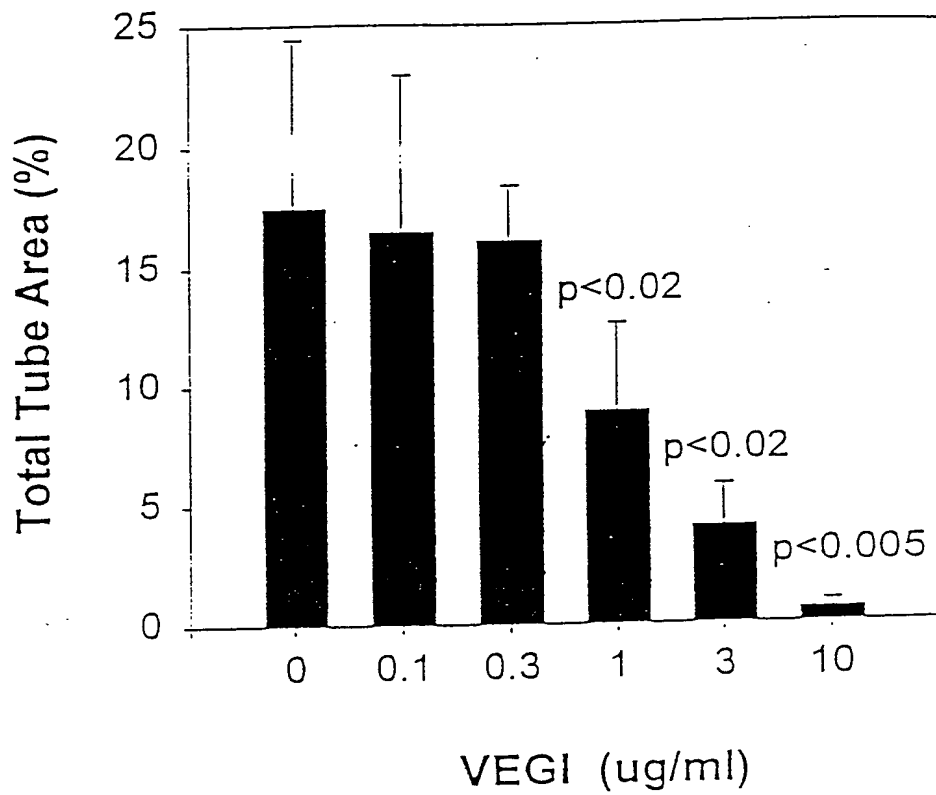


Figure 15

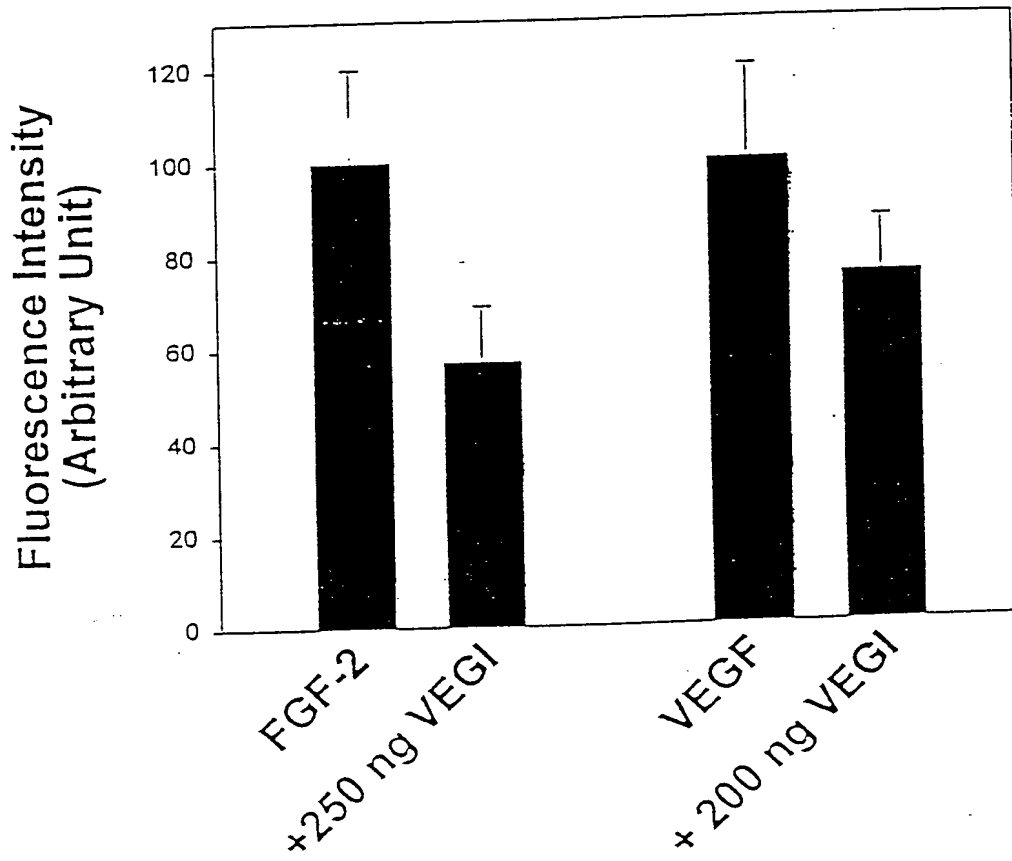


Figure 16A

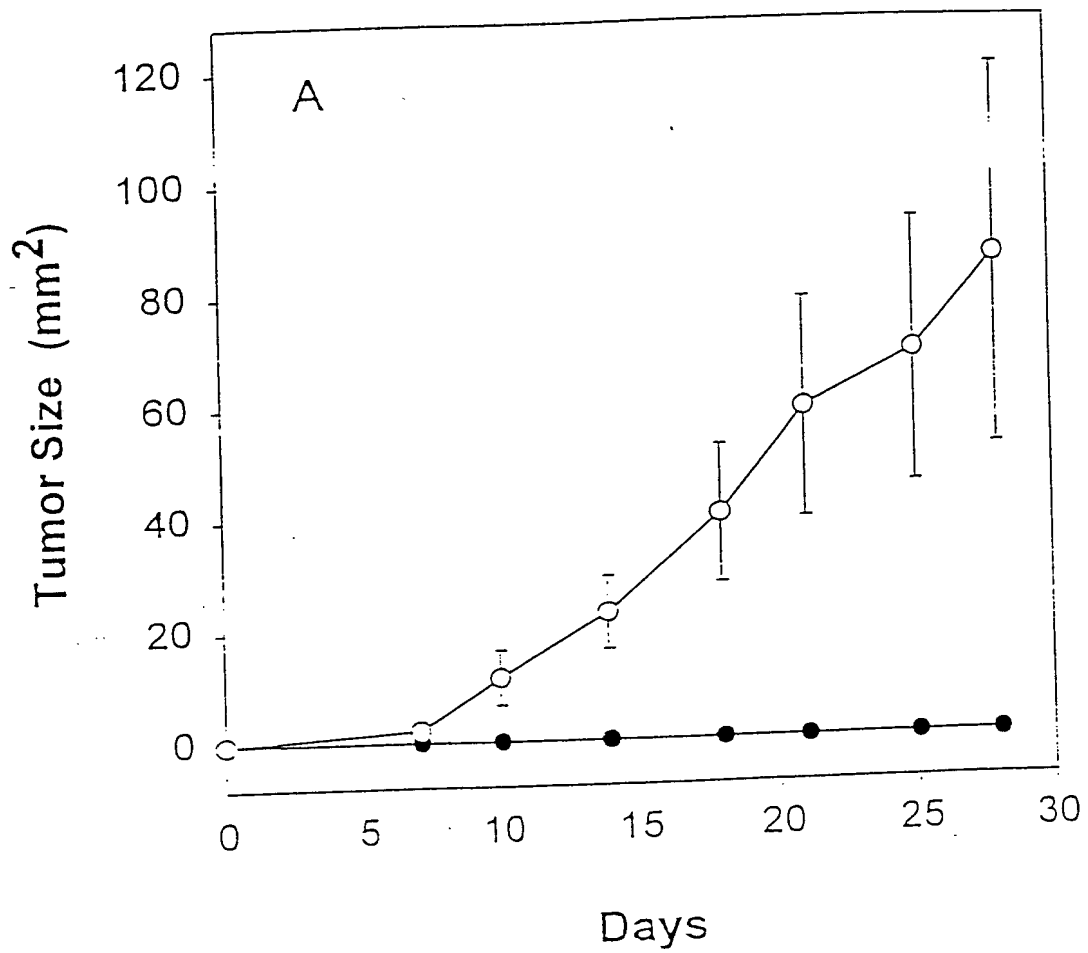


Figure 16B

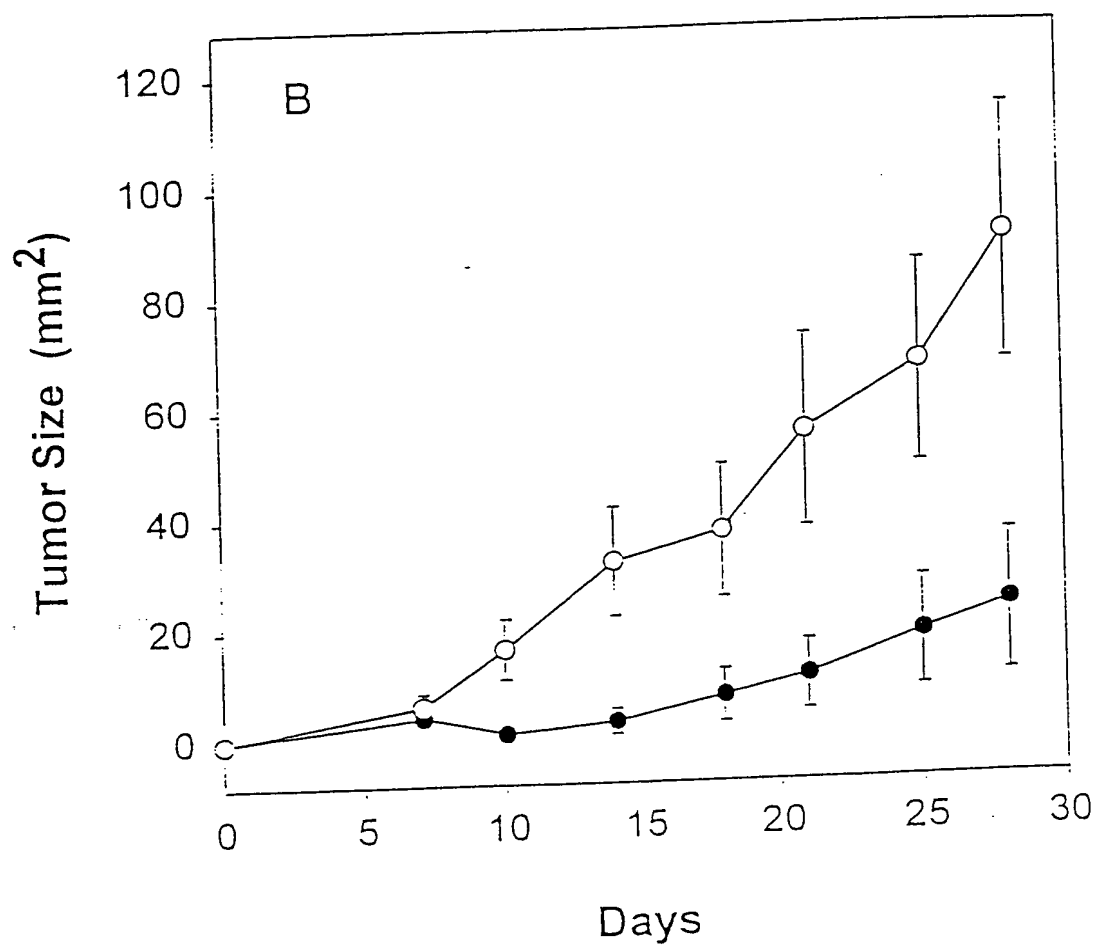
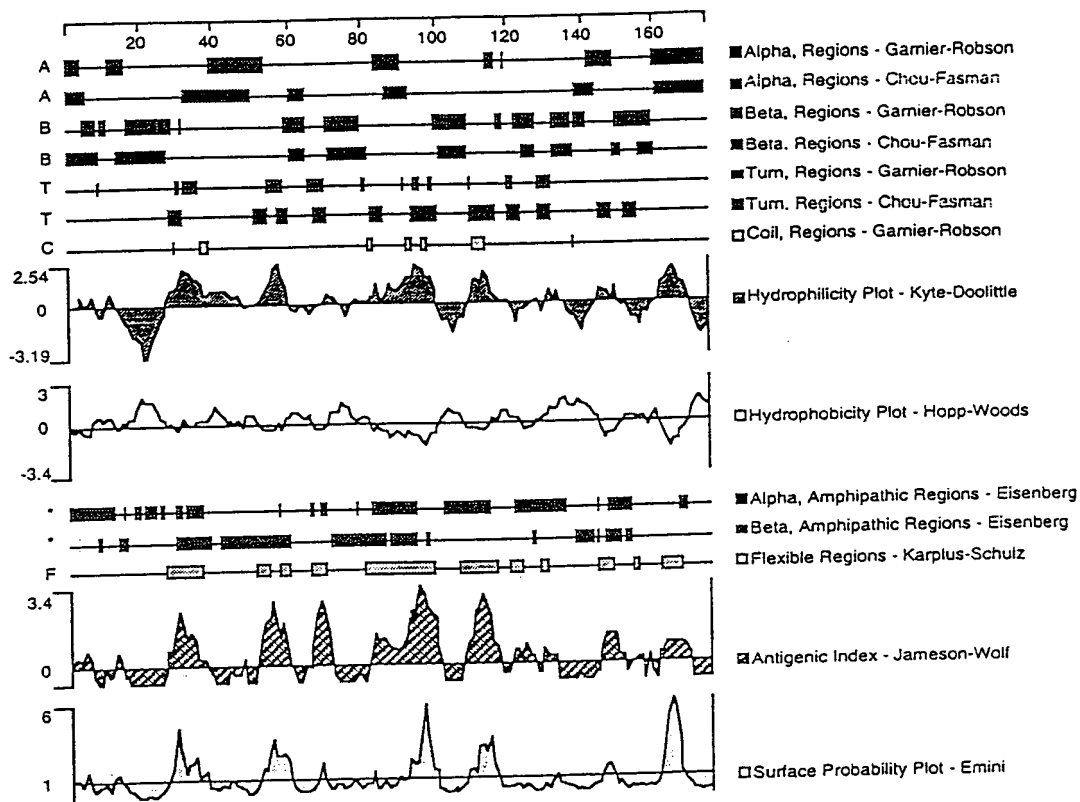


Figure 17
TNF-gamma Polypeptide Analysis



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Figure 18A

TNF-gamma-alpha	1	CCCCAATCAAGAGAAATTCCATACTATCACCAGTTGGCCGACTTTC	49
		
TNF-gamma-alpha	50	TCTAGTGCAGAAATCCAAGGCACCTCACACCTAGAGTTCCTATACCTCTG	99
		
TNF-gamma-alpha	100	AGACTCCAGAGGAAAGAACAAGACAGTGCAGAAGGATATGTTAGAACCCA	149
		
TNF-gamma-alpha	150	CTGAAAACCTAGAAGGTTGAAAAGGAAGCATACCTCCTGACCTATAAGA	199
		
TNF-gamma-alpha	200	AAATTTTTCAGTCTGCAGGGGGATATCCTTGTTGGCCCAAGACATTGGTGT	249
		
TNF-gamma-alpha	250	ATCATTTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTA	299
		
TNF-gamma-alpha	300	GGACCAGGGAGATGCCAAGTTTCATCACTTACCTCATGCCGTGAAGACA	349
		
TNF-gamma-alpha	350	AGTGTTTTGTTCCAATTGATGAATGGGGAGAAAACAGTTCAGCCAATCAC	399
		
TNF-gamma-alpha	400	TTATGGGCACAGAATGGAATTTGAAGGGTCTGGTGCCTGCCCTTGTCATA	449
		
TNF-gamma-alpha	450	CGTAAACAAGAGAGGCATCGATGAGTTTTATCTGAGTCATTTGGGAAAGG	499
		
TNF-gamma-alpha	500	ATAATTCTTGCACCAAGCCATTTTCCTAAACACAGAAGATAGGGGGATT	549
		
TNF-gamma-alpha	550	CCTTAACCTTCAITGTTCTCCAGGATCATAGGTCTCAGGATAAATTA	599
		
TNF-gamma-beta	1	ATGGCCGAGGATCTGGGACTGAGCTTTGGGGAAACAGCCAGTGTGGAA	48
TNF-gamma-alpha	600	ATTTTTCAGGTCTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCA	649
		
TNF-gamma-beta	49	ATGCTGCCAGAGCACGGCAGCTGCAGGCCCAAGGCCAGGAGCAGCAGCGC	98
		
TNF-gamma-alpha	650	GGTCACTAGTCCAAGATGPTATTCTCTTTGAACAAATGTGTATGTCCAGT	699
		
TNF-gamma-beta	99	ACGCTGGGCTCTCACCTGCTGCCTGGTGTGCTCCCCTTCCTTGCAGGAC	148
		
TNF-gamma-alpha	700	CACATATCTTTCATTCATTCTCCCAAAGCAGTTTTTAGCTGTTAGGTA	749
		
TNF-gamma-beta	149	TCACCACATACCTGCTTGTCAGCCAGCTCCGGGCCAGGGAGAGGCCTGT	198
		
TNF-gamma-alpha	750	TATTCGATCACTTTAGTCTATTTTGAAAATGATATGAGACGCTTTTTAAG	799
		
TNF-gamma-beta	199	GTGCAGTTCCAGGCTCTAAAAGGACAGGAGTTTGCACCTTCACATCAGCA	248

Figure 18B

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha	800	CAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTCTTGTCTTTC	849
TNF-gamma-beta	249	AGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGA	298
TNF-gamma-alpha	850	CAGTTGTGAGACAACTCCACACAGCACTTTAAAAATCAGTTCCAGCT	899
TNF-gamma-beta	299	CAGTTGTGAGACAACTCCACACAGCACTTTAAAAATCAGTTCCAGCT	348
TNF-gamma-alpha	900	CTGCACTGGGAACATGAAC TAGGCCTGGCCTTCACCAAGAACCGAATGAA	949
TNF-gamma-beta	349	CTGCACTGGGAACATGAAC TAGGCCTGGCCTTCACCAAGAACCGAATGAA	398
TNF-gamma-alpha	950	CTATACCAACAAATTCTGTGATCCAGAGTCGGGAGACTACTTCATTT	999
TNF-gamma-beta	399	CTATACCAACAAATTCTGTGATCCAGAGTCGGGAGACTACTTCATTT	448
TNF-gamma-alpha	1000	ACTCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA	1049
TNF-gamma-beta	449	ACTCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA	498
TNF-gamma-alpha	1050	CAAGCAGGCCGACCAAACAAGCCAGACTCCATCACTGTGGTCATCACCAA	1099
TNF-gamma-beta	499	CAAGCAGGCCGACCAAACAAGCCAGACTCCATCACTGTGGTCATCACCAA	548
TNF-gamma-alpha	1100	GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT	1149
TNF-gamma-beta	549	GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT	598
TNF-gamma-alpha	1150	CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC	1199
TNF-gamma-beta	599	CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC	648
TNF-gamma-alpha	1200	ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT	1249
TNF-gamma-beta	649	ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT	698
TNF-gamma-alpha	1250	CTCTTTGGTGGAATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT	1299
TNF-gamma-beta	699	CTCTTTGGTGGAATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT	748
TNF-gamma-alpha	1300	TACTATAGGAGGAGAGCAAATATCATTTATATGAAAGTCCTCTGCCACCGA	1349
TNF-gamma-beta	749	TACTATAGGAGGAGAGCAAATATCATTTATATGAAAGTCCTCTGCCACCGA	798
TNF-gamma-alpha	1350	GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTTGG	1399
TNF-gamma-beta	799	GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTTGG	848
TNF-gamma-alpha	1400	GGCCGGGAGTAGGGGGCATTCCACAGGGACAACGGTTTAGCTATGAAATT	1449
TNF-gamma-beta	849	GGCCGGGAGTAGGGGGCATTCCACAGGGACAACGGTTTAGCTATGAAATT	897

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha	2249	AAACCCCATCTCTACTNAAAATACNAAATTAGCCGGGCGTGGTAGCGCAT	2298
		.	.
TNF-gamma-alpha	2299	GGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATTNCTTGAAC	2348
		.	.
TNF-gamma-alpha	2349	TGGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGCGCCATTGCACTCCAGC	2398
		.	.
TNF-gamma-alpha	2399	CTGGGTAAACAAGAGCAAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA	2442

[illegible]

Figure 19

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-beta	1	MAEDLGLSFGETASVEMLPEHGSCRPKARSSARWALTCCLVLLPFLAGL	50
TNF-gamma-alpha	1	MRRFLSKVYSFPMRKLILFLVFP	23
TNF-gamma-beta	51	TTYLLVSQLRAQGEACVQFQALKGQEFAPSHQQVYAPLRADGDKPRAHLT	100
TNF-gamma-alpha	24	VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY	73
TNF-gamma-beta	101	VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY	150
TNF-gamma-alpha	74	SQVTFRGMTSECSEIRQAGRPNKPDSITVVITKVTDSTYPEPTQLLMGTKS	123
TNF-gamma-beta	151	SQVTFRGMTSECSEIRQAGRPNKPDSITVVITKVTDSTYPEPTQLLMGTKS	200
TNF-gamma-alpha	124	VCEVGSNWFQPIYLGAMFSLQEGDKLMNVSDISLVDYTKEDKTFFGAFL	173
TNF-gamma-beta	201	VCEVGSNWFQPIYLGAMFSLQEGDKLMNVSDISLVDYTKEDKTFFGAFL	250
TNF-gamma-alpha	174	L	174
TNF-gamma-beta	251	L	251

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Figure 20A
TNF-gamma-beta

1 ATGGCCGAGGATCTGGGACTGAGCTTTGGGGAAACAGCCAGTGTGGAAATGCTGCCAGAG 60
1 M A E D L G L S F G E T A S V E M L P E 20

61 CACGGCAGCTGCAGGCCCAAGGCCAGGAGCAGCAGCGCACGCTGGGCTCTCACCTGCTGC 120
21 H G **S** C R P K A R S S **S** A R W A L T C C 40

121 CTGGTGTGCTCCCCCTTCCTTGCAGGACTCACCACATACCTGCTTGTTCAGCCAGCTCCGG 180
41 L V L L P F L A G L T T Y L L V S Q L R 60

181 GCCCAGGGAGAGGCTGTGTGCAGTTCCAGGCTCTAAAAGGACAGGAGTTTGCACCTTCA 240
61 A Q G E A C V Q F Q A L K G Q E F A P S 80

241 CATCAGCAAGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGACA 300
81 H Q Q V Y A P L R A D G D K P R A H L T 100

301 GTTGTGAGACAACTCCACACAGCACTTTAAAAATCAGTTCCAGCTCTGCACTGGGAA 360
101 V V R Q T P T Q H F K N Q F P A L H W E 120

361 CATGAAGTGGCCTGGCCTTCACCAAGAACCGAATGAAGTATACCAACAAATTCCTGCTG 420
121 H E L G L A F T K N R M **N** Y **T** N K F L L 140

421 ATCCCAGAGTCGGGAGACTACTTCATTTACTCCCAGGTCACATTCCGTGGGATGACCTCT 480
141 I P E S G D Y F I Y S Q V **T** F R G M T S 160

481 GAGTGCAGTGAAATCAGACAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTC 540
161 E C S E I R Q A G R P N K P D S I T V V 180

541 ATACCAAGGTAAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGTCT 600
181 I T K V T D **S** Y P E P T Q L L M G T K **S** 200

601 GTATGCGAAGTAGGTAGCAACTGGTTCAGCCCATCTACCTCGGAGCCATGTTCTCCTTG 660
201 V C E V G S N W F Q P I Y L G A M F S L 220

661 CAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTTGGTGGATTACACAAAA 720
221 Q E G D K L M V **N** V S D I **S** L V D Y **T** K 240

721 GAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAATATCATTATATG 780
241 E D K T F F G A F L L 251

781 AAAGTCCTCTGCCACCGAGTTCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGT 840

841 TTTCTTGGGGCCGGGAGTAGGGGCATTCCACAGGGACAACGGTTTAGCTATGAAATTTGG 900

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Parameter	Value	Unit
Temperature	25.0	°C
Pressure	1.0	atm
Flow rate	1.0	L/min
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	Agilent 1200	
Mobile phase	Water	
Stationary phase	Agilent 1200	
Detector	Agilent 1200	
Software	Agilent 1200	
Hardware	Agilent 1200	
Method	Agilent 1200	
Results	Agilent 1200	
Conclusion	Agilent 1200	

[illegible]